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MEN AND BOOKS

Sir William Osler: On Full-Time Clinical Teaching in Medical Schools

[The communication which follows, dated at Oxford, September 1, 1911, was addressed by Sir William Osler to Ira Remsen, then President of the Johns Hopkins University. The editors are grateful to Miss Isabel M. Stewart of New York for the contribution of this historically significant document and for permission to publish it in the Canadian Medical Association Journal. *See editorial, page 774.]*

TO THE PRESIDENT, JOHNS HOPKINS UNIVERSITY

Dear Remsen,

The subject of whole-time clinical teachers, on which I send you the promised note, is one of great importance, not only to Universities, but to the profession and to the public at large. It is a big question, with two sides. I have tried to see both, as I have lived both, and as much, perhaps, as any one can appreciate both. Let me thank you, first, for Mr. Flexner's Report. As an Angel of Bethesda he has done much good in troubling our fish-pond, as well as the general pool. The Report as a whole shows the advantage of approaching a problem with an unbiased mind, but there are many mistakes from which a man who knows the profession from the outside only could not possibly escape. It is a pity the Report was allowed to go out in its present form, as his remarks show a very feeble grasp of the clinical situation at the Johns Hopkins Hospital; but this is not surprising and perhaps is not his fault, since he has not had the necessary training, nor, from the outside, could he get the knowledge to understand it. To say, for example, p. 14 [of the Flexner Report], as contrasted with the instructors in the laboratory side the clinical staff has been on the whole less productive and less devoted is simply not true. I deny the statement *in toto*—they have been more productive and quite as devoted. It is singularly unfortunate that he should not have been able to appreciate the work of the very men who have done as much as, or more than, any others to build up the reputation of the school and to advance the best interests of the profession. To mention, out of many, only five names—the most stable on the staff—Finney, Thayer, Bloodgood, Cushing, and Cullen. It is not too much to say that these men have done scientific work of a standard equal to that of the highest of any laboratory men connected with the University; and in addition work which in practical import, in the translation of Science into the Art, no pure laboratory men could have done. To speak as Mr. Flexner does (p. 15 of the Report) of these men as blocking the line and preventing the complete development of a race or school is perhaps pardonable ignorance, but again it certainly is not true. Take away the share of the reputation of the Johns Hopkins Medical School—particularly in Europe, which knows chiefly the Hospital Bulletin and the Reports—contributed from the clinical side, and by the junior staff, and you leave it, in comparison, poor, indeed. "By their fruits ye shall know them." After showing the treasures of my library, it is my custom to take an intelligent bibliophile to a shelf on which stand twelve handsomely bound quarto volumes, and say, "But this is my chief treasure—the 500 contributions to scientific medicine from the graduates of the first eight years of our medical school." It is a splendid record, but much more brilliant from the clinical than from the laboratory side; and a great part of the work has been directly inspired by this younger group of men. In the development of the school it was a great advantage that the local conditions in the country were not favourable, as at present—and as they have been all along on the laboratory side—to the rapid migration of assistants. It is hard to say which is the most prevalent on pp. 14 and 15 of the Report—unfairness or ignorance; but in either case gross injustice is done to the men who have made the Johns Hopkins Clinical School.

But I must confine myself to the question, and, I take it, the special advantage claimed for the whole-time system is that the professors will be better able to promote research. Fruitful research in medicine, which, by the way, depends entirely on the *man*, may be done in private, in Research Institutes, or at the Universities.

Some of the most revolutionary researches of modern medicine have come from private laboratories, and when thoroughly trained in methods, there is no reason why the very best work should not be done by practitioners.

The Research Institutes are destined to play an ever-increasing part. In the Pasteur Institute, Paris, Ehrlich's Institute, Frankfurt, the Lister Institute, and the Carnegie Laboratory, Boston, the most advanced researches are prosecuted; and in the development of a hospital side, as at the Pasteur and Rockefeller Institutes, will be found ample scope for the men who desire to be whole-time clinical researchers.

The University Hospital is in a very different position. The care and cure of patients and the teaching of young men the art of medicine are functions co-ordinate with the advancement of

knowledge. Provision for all three must be made in the modern clinic. There is something very attractive in the parallel between the problems of the Laboratories and those of the Hospital, and at first sight it may seem strange that the suggestion has not been made earlier that men should devote all their time to the clinics. It is not altogether a new departure, and it would not be hard to name clinicians—usually of the quiet studious habit, not built for battle—who have been content to work solely at the problems of disease.

A pure researcher, as at the clinical hospital of an Institute, has but two points of contact, the patient and the laboratory problem; the Director of the Clinic of a medical school has the student as well; and whether it be to our advantage to cut off his affiliation with the profession and the public, which he has heretofore enjoyed, is the question at issue. Conditions today make it impossible to have one man thoroughly charged at all these points of contact. In a big clinic, as in a department store, the importance of the head is not to be able to conduct each division separately, but to have sense enough to train, or pick, men who can; men who know their "job" and who trust a chief, whose saving gift is co-ordinating the different departments. So in a clinic the greater part of the work must be done by the juniors. To be safe the chief must always have about men who know more than he does of certain subjects. The most sterile professor may have the most fruitful laboratory. The two most productive physiological laboratories of the latter half of the last century were presided over by men who did little or nothing themselves but suggest and direct. A man at forty, in charge of a clinic, who aspires to contribute from all its departments is sure to degenerate into an exploiter of other men's work. An overseer, a director, a teacher, a commutator, he must make his personality felt in every corner of the "business", but if he has not a big enough mind to grasp the art of successful delegation he either becomes a scientific vampire, sucking the blood of his assistants, or the clinic degenerates into a one-sided organization for the study of a few problems or for the cure of all maladies by some special method.

Problems and patients suffice for the men in charge of the clinical side of Research Institutes, but only a very narrow view regards the Director of a University clinic as chiefly for research. He stands for other things of equal importance. In life, in work, in word, and in deed he is an exemplar to the young men about him, students and assistants. "Cabined, cribbed, and confined" within the four walls of a hospital, practising the fugitive and cloistered virtues of a clinical monk, how shall he, forsooth, train men for a race the dust and heat of which he knows nothing and—this is a possibility—cares less? I cannot imagine anything more subversive to the highest ideal of a clinical school than to hand over young men who are to be our best practitioners to a group of teachers who are *ex officio* out of touch with the conditions under which these young men will live. The clinical teachers belong to the fighting line of the profession, whose ambitions and activities they should share and direct. Do you imagine for a moment that men whose interests are mainly in the research aspects of medicine, and who have no touch with the rank and file—the men behind the guns—do you suppose they would get into the arena and share the struggle of their brethren? A few with Welch's broad spirit would—a majority would live lives apart, with other thoughts and other ways.

As students of the wider problems of social reform so closely associated with disease, the clinical men should come into contact with the public, whose foibles they should know, and whose advisers they should be. To seclude the ablest men in their respective departments from this contact would not be possible in the United States, where the profession lives so much in the "open"; and the attempt would, I believe, defeat itself. Those best fitted as teachers in the medical schools, the men with larger outlook, would soon kick over the traces and leave the positions to the quiet student-recluses, keen at research but as little fitted to train medical students for the hurly-burly of life as I would be to direct your laboratory.

I cannot bear to think that any successor of mine should grow up deprived of those delightful associations which I enjoyed with the profession and the public. How barren would I feel my life without these memories. And a great gap would be left in the education of a clinical teacher who had not known that inner life of the public which we meet in our ministry of health. To some extent seen in hospital work, but not in the same way, it helps to develop the side of a teacher's character very precious in his influence upon young men.

The danger would be the evolution throughout the country of a set of clinical prigs, the boundary of whose horizon would be the laboratory, and whose only human interest was research, forgetful of the wider claims of a clinical professor as a trainer of the young, a leader in the multiform activities of the profession, an interpreter of science to his generation, and a counsellor in public and in private of the people, in whose interests after all the school exists. And, remember, what we do today the other schools will try to do tomorrow. Rather than see the rise of a caste of clinical Brahmins, I would prefer a return to the French system—still in part effective—which ensures that each and every professor in a medical school—whether chemist, anatomist, pathologist, or physiologist—is kept in touch with the profession by giving him a hospital service. The Trustees of the Hospital will do well to hesitate before handing over their magnificent "plant" to a group of men to "run" on the narrow lines of a research institute, and risk the termination of that close affiliation

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with the profession and the public which has made their clinical school the most potent distributor of scientific medicine in the United States.

On the question of private practice and of fees I can speak freely. To the enormous value of the outside work in one's personal and professional development, I can bear strong testimony. In looking over my writings for this specific purpose I am surprised to see how much of my very best material came from this source. The difficulty is to keep practice within bounds, but it should not be impossible to frame regulations to ensure that the major part of the time of the clinical professors is given to the clinics. It is not so much consultations in the city, but the long distance calls—which alone in my case can I reproach myself as having interrupted my hospital work—that are disturbing. One cannot do a very large practice if private patients are not seen until 2 p.m., which was my rule. In a nutshell, the point at issue is this: After a morning spent in teaching in the laboratories, and in seeing the public and private patients not all every day, at 2 p.m. should the clinical professor go home and see patients with their doctors or should he finish the day in one of his laboratories? I maintain that an able director with a well-organized staff can do all that should be demanded in four or five hours daily, and that he is a very much better man as a teacher and as a worker if he spends the rest of the day in the service of the profession and the public. I am speaking only for the subject of medicine, but before the school is committed finally to a whole-time policy, you and Judge Harlan, as representatives of the two institutions concerned, would do well to consult the men who know—two or three selected in each country. And my opinion is not worth much, as I am naturally biased in favour of the delightful conditions under which I grew up, and I am now a clinician, not a laboratory man. It is not fair to ask Barker and Thayer. In medicine consult F. Muller and Krehl in Germany, Chauffard and Widal in Paris, Hale White and Bradford in England, Dock and Janeway in the United States—all laboratory clinicians. Do not be led away by the opinions of the pure laboratory men, who have no knowledge of the clinical situation and its needs. I believe an overwhelming majority of all the active workers at clinical medicine oppose the plan. Professor F. Muller, who represents the most advanced thought in medicine in Germany, has expressed himself strongly against the whole-time system, as directly prejudicial to the teacher and to the school.

Against the sin of prosperity, which looms large in Mr. Flexner's Report (p. 17), the clinical professor must battle hard. I was myself believed to be addicted to it; but you will be interested to know, and I would like the Trustees of the Hospital to know, that I took out of Baltimore not one cent of all the fees—none of which came from the hospital patients—I received in the 16 years of my work. The truth is, there is much misunderstanding, and not a little nonsense on the tongues, of the people about the large fortunes made by members of the clinical staff. At any rate, let the University and Hospital always remember with gratitude the work of one "prosperous" surgeon, whose department is so irritatingly misunderstood by Mr. Flexner. I do not believe the history of medicine presents a parallel to the munificence of our colleague Kelly to his clinic. Equal in bulk, in quality, and in far-reaching practical value to the work from any department of the University, small wonder that his clinic became the Mecca for surgeons from all parts of the world, and that his laboratory methods, perfected by Drs. Cullen and Hurdon, have become general models, while through the inspiration of Mr. Max Brodel a new school of artistic illustration in medical works has developed in the United States. And, shades of Marion Sims, Goodell and Gaillard Thomas! this is the department which the "Angel of Bethesda" in the fullness of his ignorance, suggests should be, if not wiped out, at any rate merged with that of Obstetrics.

There are other points which I should like to discuss, but this letter is already too long. To one I must refer. If there is to be a new model and a self-denying ordinance, under which the clinical teachers are to live laborious days and scorn the delights of the larger life, let them come in on a University basis. If a man's value in the open market is to be considered, do not insult him by offering $7500 as suggested in Alternative Scheme I, but, as laboratory men, let them be content with salaries which are thought good enough for men just as good.

We are all for sale, dear Remsen. You and I have been in the market for years, and I have loved to buy and sell our wares in brains and books—it has been our life. So with institutions. It is always pleasant to be bought, when the purchase price does not involve the sacrifice of an essential—as was the case in the happy purchase of us by the Women's Educational Association—but in Alternative Scheme I we chance the sacrifice of something that is really vital, the existence of a great clinical school organically united with the profession and with the public. These are some of the reasons why I am opposed to the plan as likely to spell ruin to the type of school I have always felt the Hospital should be and which we tried to make it—a place of refuge for the sick poor of the city—a place where the best that is known is taught to a group of the best students—a place where new thought is materialized in research—a school where men are encouraged to base the art upon the science of medicine—a fountain to which teachers in every subject would come for inspiration—a place with a hearty welcome to every practitioner who seeks help—a consulting centre

for the whole country in cases of obscurity. And it may be said, all these are possible with the whole-time clinical professors. I doubt it. The ideals would change, and I fear lest the broad spirit which has characterized the school should narrow, as teacher and student chased each other down the fascinating road of research, forgetful of those wider interests to which a great hospital must minister.

Take the money by all means but use it:

1. To reduce the number of students.

2. To rearrange the laboratories in accordance with Alternative Scheme II.

But lastly and chiefly, divert the ardent souls who wish to be whole-time clinical professors from the medical school in which they are not at home to the Research Institutes to which they properly belong, and in which they can do their best work.

Believe me, my dear Remsen,

Sincerely yours,

Oxford, WILLIAM OSLER

September 1, 1911.

SPECIAL ARTICLE

Smallpox — A Retrospect

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ABSTRACT

Smallpox has been known as a disease of man since the earliest times. However, its severity increased greatly during the eighteenth century, stimulating physicians and others to find methods of protection against it. Variolation (the inoculation of smallpox material into the skin) was tried, and for a while found general approval, although its practice was not without danger. In 1796, Edward Jenner began his investigations into the use of cow-pox material (vaccination) as a prophylactic against smallpox, and later showed that vaccination could confer protection. Although vaccination centres were first set up in Canada early in the nineteenth century, the disease on occasion assumed epidemic proportions, such as occurred in Montreal in 1885. Sporadic outbreaks have occurred since then, including the recent case in Toronto. From the public health point of view, maintenance of a high level of immunity to smallpox throughout the general population is necessary if serious epidemics are to be avoided.

SMALLPOX is one of the oldest diseases known to man. It is believed to have been endemic in China several centuries before Christ and subsequently occurring in Europe. Its spread was facilitated by means of the large movement of itinerant soldiers and others during the Crusades, and by the beginning of the sixteenth century had gained a firm foothold in most parts of the then-known world. But it was not until the reign of James I that smallpox became known as a killing disease in England. Prior to this time it was confused with measles. A sister and a brother of Charles II died from it in 1660, and Queen Anne contracted the disease in 1677. The virulence of the infection increased greatly at the beginning of the eighteenth century and this was largely responsible for the public and medical interest in the disease.

During the Byzantine period several references were made to outbreaks of smallpox. Eusebius, Bishop of Caesarea, described a Syrian epidemic in 302 A.D., and the term "variola" was first used by Marius, Bishop of Avenches, in 570 A.D. *The Ishinho,* the oldest Japanese medical text written by Yasuhori Tamhu in 982 A.D., records the existence of isolation hospitals for smallpox victims. However, the earliest known medical text devoted to smallpox and measles was written by Rhazes about the year 910 A.D. It was translated from the original Arabic into Syriac and later into Greek. The first Latin translation by Giorgio Valla appeared in 1498, being published in Venice. A Latin translation of Rhazes by the Rev. Dr. Thomas Hunt was given at the end of Richard Mead's work on the same diseases entitled "De Variolis et Morbillis Liber", 1747. This served as the text for the first English version written by John Theobald, printed in London in the same year. The work has been translated into many languages over the years, and an edition in English was published by the

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